

# SPECIFICATION

## “Database Management Systems”

5

### ABSTRACT OF THE DISCLOSURE

0907592-11501

A database management system is adapted to hold permanent records of the states of a database both before and after database-modifying transactions so as to allow all previous states of the database to be directly accessed, without requiring storage of large amounts of redundant information. To this end the system relates parent data items (such as America, Spain; S\*) in the record of each database state to dependent data items (such as Africa, Canada, France; France, Turkey) in the record of the same database state. Additionally the system relates a root data item (such as England; E\*) in the record of each database state to the other data items in that record. Such relationships allow the state of the database after a database-modifying transaction to be determined by relating the root data item (E\*) corresponding to that database state to both data items (S\*, Turkey) in the record of that database state and data items (America, Africa, Canada, France) in the record of the state of the database before the data-modifying transaction.

20

(Figure 2)